

Virginia Department of Environmental Quality

Air Division

Office of Air Permit Programs

Annual Report for Calendar Year 2005

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## I. Introduction: Permit Program Description and Overview

### A. Overview of Air Permitting in Virginia

The federal Clean Air Act (CAA) and the Virginia Air Pollution Control Law authorize the establishment and administration of air emissions permitting programs as tools to achieve, maintain, and prevent deterioration of air quality that meets National Ambient Air Quality Standards (NAAQS) for criteria pollutants.<sup>1</sup> These laws also authorize permitting to regulate the emissions of hazardous air pollutants (HAPs).

Under the direction of the State Air Pollution Control Board, the Virginia Department of Environmental Quality (DEQ) issues several different types of air emissions permits that regulate the construction and operation of certain stationary sources of air pollution.<sup>2</sup> These permits include:

- **Minor Permits (Minor NSR Permit) for New or Modified Source**, which are required prior to the construction, modification, relocation, or reconstruction of non-exempted minor stationary air pollution sources as well as certain major sources not subject to nonattainment area or Prevention of Significant Deterioration (PSD) permit requirements.<sup>3</sup>
- **General Permits**, which are a form of Minor NSR permits used to regulate in a streamlined fashion standardized operations that do not require case-by-case analysis. DEQ began general permitting during December 2002 for certain non-metallic mineral mining operations. That remains the only category of general air permit administered by DEQ. DEQ is currently evaluating possible general permits for other source categories.
- **Nonattainment Areas (NA Permits) for New and Modified Sources**, which are required prior to the construction, modification, relocation, or reconstruction of major air pollution sources in areas that do not attain the NAAQS.
- **Prevention of Significant Deterioration Permits (PSD Permits) for New and Modified Sources**, which are required prior to construction, modification, relocation, or reconstruction of major air pollutant sources located in areas that do attain the NAAQS.

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<sup>1</sup> NAAQS provide health-based standards for six criteria pollutants--carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur oxides. As a precursor to formation of ozone, volatile organic compounds (VOCs) are also regulated in order to achieve NAAQS.

<sup>2</sup> DEQ provides an online permitting guide at <http://www.deq.virginia.gov/permits/homepage.html> that describes applicability, requirements, procedures, and authority for DEQ air, water, and waste permits as well as environmental permitting programs of the Virginia Marine Resources Commission and Department of Agriculture and Consumer Services. More detailed information on DEQ air permitting requirements and procedures (including public comment and hearing provisions) can be obtained at <http://www.deq.virginia.gov/air/permitting/homepage.html> or by contacting DEQ regional office air permitting staff.

<sup>3</sup> In addition to authorizing construction, modification, reconstruction, or relocation of pertinent air pollution sources, these permits also authorize operation. Minor NSR, NA, and PSD permits are all forms of NSR permitting.

- ***Title V Federal Operating Permits***, which are required to operate major stationary sources of air pollution.<sup>4</sup>
- ***Title IV Acid Rain Permits***, which are applicable to fossil fueled, electricity grid-connected electrical generating units (EGUs) that are subject to provisions of Title IV of the CAA.
- ***State Operating Permits (SOPs)***, which are used to create federally enforceable permit conditions on stationary source facilities that elect to operate below major source thresholds but would otherwise be subject to federal Title V provisions. SOPs can also be used for consolidating multiple minor source air permits at a facility, for emissions trading and banking, and for imposing source-specific emission standards under certain circumstances.

## ***B. Permitting Activity***

There are several types of permit processing actions. These include:

- Issuance of a new permit,
- Significant amendment of an existing permit,
- Minor amendment of an existing permit,
- Administrative amendment of an existing permit, and
- Denial of a new permit or permit amendment.

DEQ also writes exemption letters for sources wishing official confirmation that an air permit is not required for a particular operation or emissions unit. Another type of permit action is withdrawal of a permit application

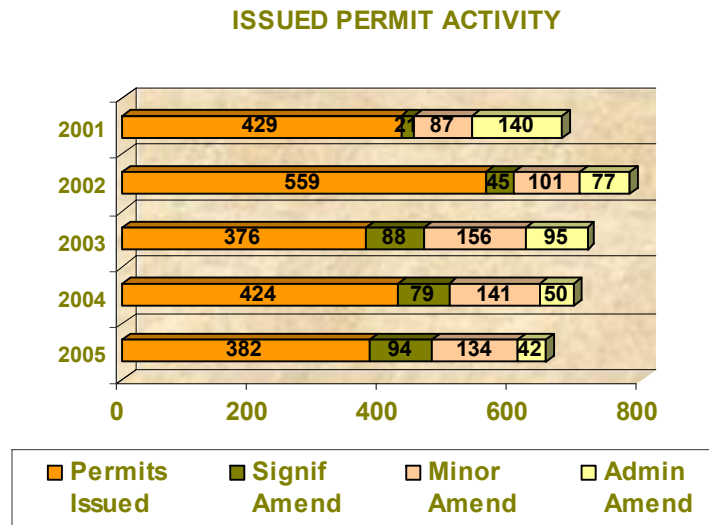
Table 1 summarizes DEQ air permitting actions for the past five years. Figure 1 depicts in graphical form permits and permit amendments issued during those same years. Table 2 shows permits and permit amendments issued by each DEQ regional office; exemption letters, denials, and withdrawals are not included in the total permit actions.

**Table 1. Summary of DEQ Air Permitting Actions**

<b>CY</b>	<b>Permits Issued</b>	<b>Significant Amendments</b>	<b>Minor Amendments</b>	<b>Administrative Amendments</b>	<b>Exemptions</b>	<b>Denials</b>	<b>Withdrawals</b>	<b>Total Actions</b>
<b>2001</b>	429	21	87	140	342	1	76	1096
<b>2002</b>	559	45	101	77	248	2	109	1141
<b>2003</b>	376	88	156	95	304	1	76	1096
<b>2004</b>	424	79	141	50	313	4	81	1092
<b>2005</b>	382	94	134	42	316	1	59	1028

<sup>4</sup> There are distinctions between Title V and NSR permitting program definitions of major sources (see Section II below) as well as between federal and state definitions (see Section III below).

**Figure 1. Permits and Permit Amendments Issued**



**Table 2. Permits and Permit Amendments Issued by Regional Office\***

REGION	NVRO	PRO	SCRO	SWRO	TRO	VRO	WCRO	Total Permits & Amendments Issued
CY								
2001	82	183	67	112	94	55	84	677
2002	69	121	83	151	119	78	95	716
2003	85	155	78	157	106	73	60	714
2004	88	193	51	90	88	103	60	673
2005	86	128	58	127	106	83	59	647

\* NVRO--Northern Virginia Regional Office, includes Fredericksburg Satellite Office  
 PRO--Piedmont Regional Office  
 SCRO--South Central Regional Office  
 SWRO--South West Regional Office  
 TRO--Tidewater Regional Office  
 VRO--Valley Regional Office  
 WCRO--West Central Regional Office

## **II. Clean Air Act Title V Federal Operating Permit Program**

### **A. Program Description**

A Title V Federal Operating Permit is required for all major stationary sources of regulated air pollutants.<sup>5</sup> Among major sources are those emitting or with the potential to emit at least 10 tons per year of any one HAP or 25 tons per year of a combination of HAPs as well as sources that emit or have the potential to emit at least 100 tons per year

<sup>5</sup> Title V major sources are defined in 9 VAC 5-80-60 C. There are some differences between the definitions of major sources under the Title V Federal Operating Permit program and the NSR permit programs. Also, there are several complexities in the definitions, including whether fugitive and insignificant source potential-to-emit should be included in determining whether a facility meets the major source threshold.

of any criteria pollutant. In Northern Virginia, which is classified as “moderate” under the 8-hr ozone standard and is part of the Ozone Transport Region, the major source threshold for NO<sub>x</sub> is 100 tons per year and for VOC is 50 tons per year.

## B. Permitting Activity

The Department has issued 268 Title V permits from the initial batch of permit applications. Forty-six of these facilities have been shutdown or reclassified as synthetic minor facilities since the initial permit applications were submitted. Currently there are 8 initial batch Title V applications pending processing.

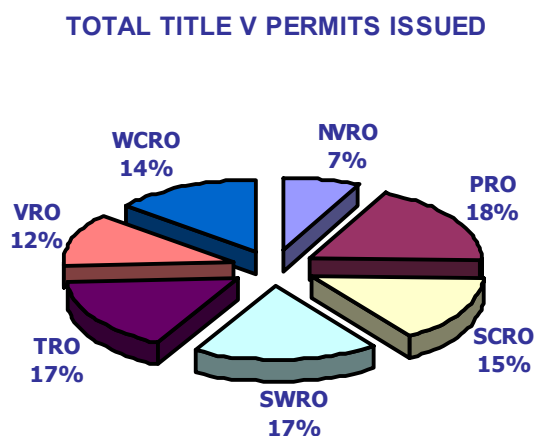
Table 5 shows Title V permitting actions during the past five years while Figure 2 shows how those actions were distributed by DEQ region.

**Table 5. Title V Permitting Actions**

CY	Permits Issued	Significant Modifications	Minor Modifications	Administrative Amendments	Reopened Permits*	Total Permits and Amendments Issued
2001	85	0	1	4	0	90
2002	56	5	4	3	0	68
2003	78	18	15	13	1	132
2004	64	13	16	11	0	104
2005	40	19	6	16	0	81
<b>Total</b>	<b>323</b>	<b>55</b>	<b>42</b>	<b>47</b>	<b>1</b>	<b>475</b>

\*Reopened permits are changes initiated by DEQ, most frequently done to incorporate new or changed regulatory requirements into existing Title V permits.

**Figure 2. Title V Permits and Permit Amendments Issued by Regional Office (Percent of total number of actions during 2001-05)**



### **III. Minor New Source Review (NSR) Permits**

#### ***A. Program Description***

The Minor NSR Permitting Program is the largest air permitting program in Virginia in terms of numbers of existing permits, permit applications, permit actions, and regulated entities. Minor NSR Permits are required for the construction, modification, relocation, or reconstruction of non-exempted stationary sources that will emit regulated air pollutants above the minimum exemption levels as found in 9 VAC 5 Chapter 80 Article 6 of the Minor NSR regulations and that are not subject to the nonattainment area or Prevention of Significant Deterioration (PSD) permit requirements. Minor NSR permits can be issued at PSD and nonattainment major stationary sources in addition to minor stationary sources. The program also regulates those sources as defined as major in the Minor NSR regulations. These are often referred to as state majors. State majors are sources that meet the state 100 ton per year threshold for major sources of criteria air pollutants but do not qualify as major sources under the PSD and nonattainment major source programs.

While the Minor NSR permit is considered a pre-construction permit (also covering modification, relocation, and reconstruction), it also authorizes operation of the permitted source. The permit does not expire and so remains valid until superseded by a new NSR permit (if the source is modified, relocated, or reconstructed) or until the emissions units are permanently shut down and the permit is revoked.

Regulations governing the NSR program were amended September 1, 2002, with 9 VAC 5-80-1100 *et seq.* replacing 9 VAC 5-80-10 and 11. DEQ has proposed other changes to the minor NSR regulations as described in the Issues in Permitting section of this document.

#### ***B. Permitting Activities***

Table 6 summarizes Minor NSR permits issued during CYs 2001 through 2005 (permit amendments are not included). The data include average and maximum processing times. The table also indicates the number of permits issued within or exceeding processing time objectives.<sup>6</sup> Figures 3 and 4 indicate Minor NSR permit issuances on a monthly basis and by region, respectively. Since Minor NSR is the largest category of permitting by number of permits and regulated entities, these figures give some indication of regional distribution of work and regulated entities as well as the pace of work. This table and the two figures do not include state major NSR permits, of which three were issued in CY 2002, four in CY 2003, four in CY 2004 and four in CY 2005.

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<sup>6</sup> Processing time is the number of calendar days between completed application and permit issuance. For Minor NSR Permit applications that do not require a public hearing the expected processing time is 90 days or less. For applications that require public hearing the expected processing time is 180 days or less.

**Table 6. Minor NSR Permitting Activity and Application Processing Time**

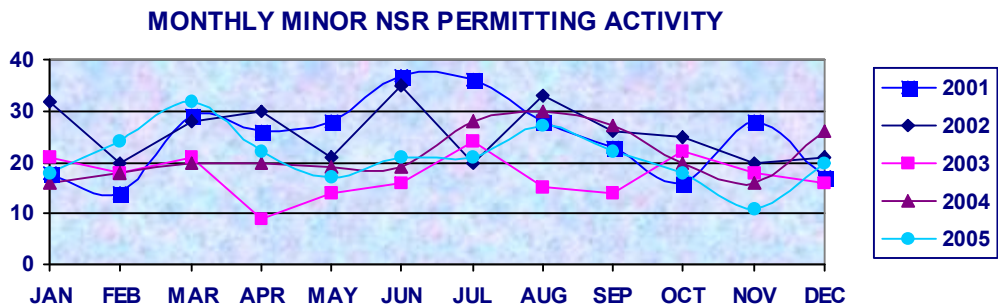
CY	Permits Issued	* Avg. Processing Time in Days w/Hearing	** Avg. Processing Time in Days w/o Hearing	Max. Processing Time in Days w/Hearing	Max. Processing Time in Days w/o Hearing	Permits Processed in Expected Time	Permits Not Processed in Expected Time
2001	390	48	40	75	147	377	13
2002	388	101	41	124	155	379	9
2003	269	82	41	82	166	259	10
2004	295	112	38	112	564	281	14
2005	291	45	31	50	256	286	5

\* Expectation is 180 days or less for permits requiring public hearing.

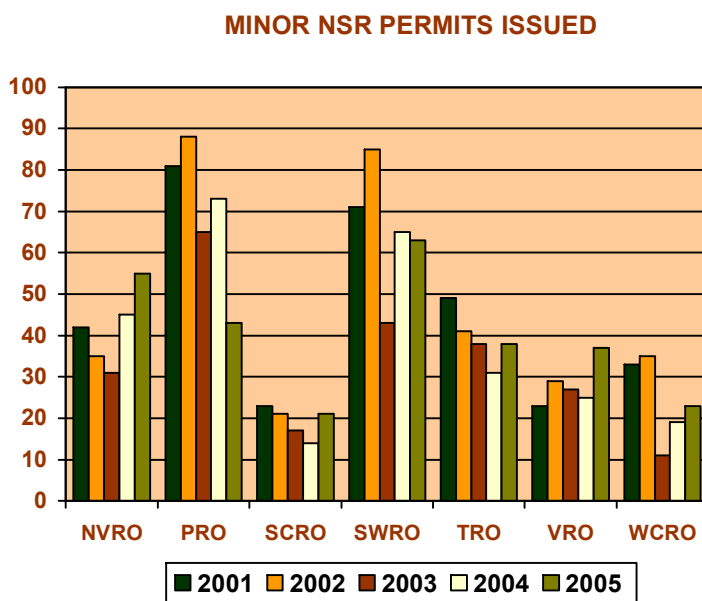
\*\* Expectation is 90 days or less for permits not requiring public hearing.

\*\*\* No minor NSR permit applications were issued in CY 2004 that required hearings.

**Figure 3. Monthly Number of Minor NSR Permits Issued (Not Including Amendments)**



**Figure 4. Aggregate Number of Minor NSR Permits Issued by Regional Office (Not Including Amendments)**



### **C. General Permits**

As was discussed in the introductory section of this report, DEQ has begun developing general permits for air emissions from selected activities. The general permit provides a streamlined means for permitting standardized minor source operations that do not require case-by-case analyses and permit conditions. The general permit falls under the Minor NSR category.

The Nonmetallic Mineral Processing General Permit came into effect on December 2, 2002 and is, so far, the only air emissions general permit available from DEQ. DEQ issued seventeen Nonmetallic Mineral Processing General Permits in CY 2003, twenty-one in CY 2004, and eleven in CY 2005.

## **IV. Nonattainment Area Major Source Permitting and Prevention of Significant Deterioration (PSD)**

### **A. Nonattainment Permit Program**

While sources subject to Minor NSR Permits and PSD major NSR Permits have to meet Best Available Control Technology (BACT) levels of air pollution abatement for criteria pollutants, new and modified major sources operating in areas that do not meet the NAAQS are subject to the more stringent Lowest Achievable Emissions Rate (LAER) standards. Furthermore, such sources are required to obtain offsetting emission reductions from other sources.

Major New or Modified Source Construction Permits for Nonattainment Areas are required of new, modified, relocated, and reconstructed major stationary air pollution sources in nonattainment areas.<sup>7</sup> These permits also authorize operation of the source. Under the 1-hr ozone standard, Northern Virginia was designated as a severe nonattainment area; however, on June 15, 2005, the 1-hr standard became no longer effective. Northern Virginia is currently designated as a moderate Nonattainment area for the 8-hour ozone standard but because it is part of the Ozone Transport Region the major source threshold for NO<sub>x</sub> is 100 tons per year of NO<sub>x</sub> and 50 tons per year of VOC.

## ***B. PSD Permit Program***

The PSD program was designed into the Clean Air Act in order to prevent areas that have cleaner air than required by the NAAQS from being degraded. PSD permits apply to major stationary air pollution sources that emit at least 250 tons per year of any one or combination of criteria air pollutants, except that 28 specific industries and processes are subject to a 100 tons per year threshold.<sup>8</sup> Table 7 Summarizes PSD and Nonattainment permits issued during the past five years.

**Table 7. Summary of PSD and Nonattainment Area Major Source Permitting Activity**

CY	PSD	Nonattainment	Number of Permits Issued
2001	1	0	1
2002	3	1	4
2003	2	0	2
2004	5	0	5
2005	1	0	1

## **V. Other Air Permitting Programs**

### ***A. State Operating Permit Program***

The State Operating Permit (SOP) is an elective permit issued at the request of the applicant or at the discretion of DEQ. The SOP is typically used for sources that have the potential to emit air pollution at levels that would qualify them as major sources but agree to operate their facilities in a way that keep them as minor sources. Such sources are

<sup>7</sup> These permits are sometimes called "PSD nonattainment" because an area that is in nonattainment for one criteria pollutant is generally in attainment for most other criteria pollutants. For example, a major source of both NO<sub>x</sub> and carbon monoxide (CO) may be subject to nonattainment permitting for NO<sub>x</sub> and PSD permitting for CO in an area such as Northern Virginia. This is because the area is in nonattainment for ozone (of which NO<sub>x</sub> is a precursor) but is in attainment of for CO. Also, NA and PSD permits may cover particular pollutants that are only subject to Minor NSR requirements at a particular source.

<sup>8</sup> A list of the 28 industries is available at <http://www.deq.virginia.gov/air/permitting/xairperm.html> under the PSD program description.

called synthetic minors. The SOP establishes federally enforceable permit conditions for such sources while allowing the sources to avoid more complex procedures and conditions associated with major source and Title V permitting.

The SOP can also be employed to consolidate multiple air permits at certain facilities into one operating permit. Under some circumstances it can be issued to facilitate emission trading and banking which is allowed under the NO<sub>x</sub> SIP Call regulation. Also, at DEQ discretion, the SOP may be issued to cap specific sources or emissions units to remedy a violation, or to establish source-specific emission standards or other requirements.

The SOP is also used to incorporate federal requirements into federally and practically enforceable conditions. Requirements for Phases I and II of the NO<sub>x</sub> SIP Call were incorporated into state operating permits.

Table 8 indicates SOP activity by DEQ regional office while Table 9 and Figure 5 summarize types of SOP actions. The growth in SOPs issued since 2001 can be correlated with increased implementation of the Title V operating permit program.

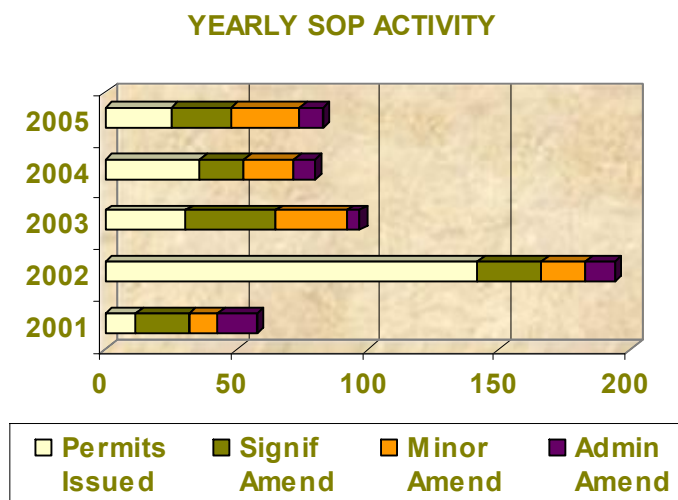
**Table 8. State Operating Permitting Activity by DEQ Regional Office**

<b>Region CY</b>	<b>NVRO</b>	<b>PRO</b>	<b>SCRO</b>	<b>SWRO</b>	<b>TRO</b>	<b>VRO</b>	<b>WCRO</b>	<b>Total Permits Issued, Including Amendments</b>
<b>2001</b>	2	19	9	4	17	4	3	58
<b>2002</b>	16	37	27	17	52	18	27	194
<b>2003</b>	7	26	13	9	25	8	9	97
<b>2004</b>	15	16	8	5	19	11	6	80
<b>2005</b>	9	18	9	7	27	4	8	82
<b>Total</b>	49	116	66	42	140	45	53	516

**Table 9. State Operating Permitting Activity by Type**

<b>CY</b>	<b>Permits Issued</b>	<b>Significant Amendments</b>	<b>Minor Amendments</b>	<b>Administrative Amendments</b>	<b>Total Permits Issued, including Amendments</b>
<b>2001</b>	12	20	11	15	58
<b>2002</b>	142	24	17	11	194
<b>2003</b>	31	34	27	5	97
<b>2004</b>	36	17	19	8	80
<b>2005</b>	24	26	23	9	82

**Figure 5. Yearly State Operating Permit Activity**



#### ***B. Title IV Acid Rain Operating Permit Program***

In accordance with Title IV of the Clean Air Act, the owners of certain EGUs are subject to specific SO<sub>2</sub> and NO<sub>x</sub> emission limits as well as monitoring, record keeping, and reporting requirements. Such facilities must have an Acid Rain Operating Permit. These facilities are eligible to participate in national SO<sub>2</sub> emissions trading as well as in the Virginia NO<sub>x</sub> trading program.

DEQ has the objective of incorporating Acid Rain Operating Permit provisions into the Title V Federal Operating Permit to create a single federally enforceable operating permit for pertinent air pollution sources by January 2008.

DEQ issued five new or renewed Title IV Acid Rain Operating Permits in CY 2002, nine in CY 2003, and two in CY 2004.

## **VI. Issues in Air Permitting**

#### ***A. Proposed Changes to Virginia's Minor NSR Regulations (Article 6)***

In 2002, substantial revisions to the minor NSR program were adopted that included a change in the way permit applicability was determined. Those revisions changed the applicability approach from examining physical or operational changes at individual emissions units to looking source-wide for net emissions changes at a facility.

While this new approach has worked well in the major NSR programs, such as the PSD program, it is problematic for the minor NSR program due to the lack of an underlying permitting program that would make the netting approach enforceable. This introduced difficulties for DEQ permitting staff and the regulated community in determining permit and BACT applicability, thus compromising timeliness, efficiency, and consistency of permit processing.

The Air Pollution Control Board approved DEQ moving forward with changes to Article 6 at the September 2004 Board Meeting. The changes are currently going through the Administrative Process Act (APA) process with anticipated finalization in the fall of 2007. It is anticipated the changes will return minor NSR permitting to an applicability approach similar to the pre-2002 revisions.<sup>9</sup>

#### ***B. Major NSR Reform***

On December 31, 2002, EPA promulgated its final rule revising the federal NSR regulations for PSD and nonattainment areas. Virginia must revise its PSD and nonattainment permit regulations to reflect the federal rule revisions and in order to meet its obligation under the Clean Air Act. The proposed final regulations were approved by the State Air Pollution Control Board at their December 8, 2005 meeting; however the board made a number of changes to the department's proposal, including removal of demand growth provisions which exist in the federal version, and removing the requirement that the effective date be contingent upon EPA approval. These changes caused concern with the regulated community. Petitions for reconsideration from the regulated community are anticipated.

#### ***C. Title V Deadlines***

As discussed previously, a federal deadline of December 1, 2003 was imposed on DEQ to complete processing of 287 Title V permit applications.<sup>10</sup> These applications constitute the initial batch of submissions from calendar year 1998. As of the end of CY 2004, 269 of these applications had been processed and permits issued while 18 were still pending.

The EPA found DEQ's progress with initial batch Title V permitting to be satisfactory. DEQ is working hard to complete work on remaining initial batch applications while processing new and renewal Title V permit applications. Some of the remaining initial batch permits had been delayed due to applicant-specific complications such as compliance issues that have not been fully resolved or complex issues related to protection of confidential business information.

#### ***D. Classification and Reclassification of Nonattainment Areas<sup>11</sup>***

In 2003 a five-county and five-city area<sup>12</sup> of Northern Virginia closest to Washington, DC was reclassified from serious to severe nonattainment for ozone under the 1-hour standard and was made subject to a major source threshold of 25 tons per year for NOx and VOCs. However, in April 2004 EPA issued designations under the new 8-hour

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<sup>9</sup> DEQ makes and amends regulations in accordance with the Virginia Administrative Process Act. Please see the Virginia Regulatory Town Hall at <http://townhall.state.va.us> and the DEQ Public Notices page at <http://www.deq.virginia.gov/info/publicnotices.html> for public participation and comment opportunities. The Virginia Regulatory Town Hall has an e-mail alert feature for those interested in tracking regulatory changes.

<sup>10</sup> Actually there were approximately 340 initial batch applicants, however a number of applications were withdrawn while other sources accepted enforceable limitations on operations to qualify themselves as synthetic minor sources under the State Operating Permit program.

<sup>11</sup> See <http://www.deq.state.va.us/air/status.html> for a map of ozone nonattainment designations.

<sup>12</sup> Counties of Arlington, Fairfax, Loudoun, Prince William, Stafford, & Cities of Alexandria, Fairfax, Falls Church, Manassas, Manassas Park

ozone standard that classified a four-county, five-city area of Northern Virginia<sup>13</sup> as moderate nonattainment along with the two-county, one-city Fredericksburg area<sup>14</sup>. From April 2004 until June 2005 both standards applied, however on June 15, 2005 EPA rescinded the 1-hour standard. In 2005, Northern Virginia was classified as moderate for the 8-hour ozone standard.

Even though Northern Virginia is classified as a moderate nonattainment area, the major source threshold for VOC remains lower than those associated with a moderate nonattainment area because Northern Virginia is part of the Ozone Transport Region (OTR). The major source thresholds for the OTR are 100 tons per year for NO<sub>x</sub> and 50 tons per year VOC. The OTR includes the Stafford County area. Additionally, an area designated as moderate is required to use a 1.15 to 1 offset ratio for new sources.

The Richmond and Hampton Roads areas both remain classified as a marginal and retain a 100 ton per year major source threshold for criteria pollutants. The offset ratio required for new sources in a marginal nonattainment area is 1.1 to 1.

The Fredericksburg area was redesignated as being in attainment for the 8-hr ozone standard on December 23, 2005. Redesignation requests for 8-hr ozone standard for both Richmond and Hampton Roads will be submitted in 2006.

In December 2004 EPA classified a four-county, five-city area in Northern Virginia as nonattainment for fine particulate matter (PM 2.5)<sup>15</sup>. EPA provided interim guidance on April 5, 2005 regarding permitting of PM 2.5.

## ***E. Federal Regulatory Initiatives***

### **1. Best Available Retrofit Technology - BART**

The U.S. Environmental Protection Agency announced a major effort to improve air quality visibility in national parks and wilderness areas in 1999. This effort resulted in the development of the [Regional Haze Rule](#). This rule calls for state and federal agencies to work together to improve visibility in 156 national parks and wilderness areas known as class I areas. The class I areas located in Virginia are the [Shenandoah National Park](#) and James River Face Wilderness. States must require certain older, large facilities to install the best retrofit emission controls as part of the states strategy to meet the regional haze rule. This requirement, known as the best available retrofit technology (BART) requirement applies to plants emitting pollutants that contribute to visibility degradation. Application of BART is similar to the application of BACT on new and modified facilities.

Under the rule, facilities are considered to be BART eligible if they were built between 1962 and 1977 and fall into one of 26 specified source categories, and if the aggregate potential emissions of all those units identified above is greater than 250 tons a year of visibility-impairing pollution (NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM 2.5, and VOC in some conditions).

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<sup>13</sup> Counties of Arlington, Fairfax, Loudoun, Prince William, & Cities of Alexandria, Fairfax, Falls Church, Manassas, Manassas Park

<sup>14</sup> Spotsylvania, Stafford, City of Fredericksburg

<sup>15</sup> Counties of Arlington, Fairfax, Loudoun, Prince William, & Cities of Alexandria, Fairfax City, Falls Church, Manassas, & Manassas Park

Since the NSR program did not begin until the early 1970s, many of the BART eligible facilities previously have been exempt from federal pollution control requirements under the Clean Air Act.

The Department is currently evaluating the BART eligible facilities through modeling to determine if the facility is having an impact on regional haze. Facilities that are determined to contribute to regional haze will be required to submit a BART analysis for review and approval by the agency.

## **2. *Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule (CAMR)***

In March 2005 EPA adopted new rules to address the interstate transport of air pollutants known as the Clean Air Interstate Rules (CAIR), which regulates emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) and the Clean Air Mercury Rule (CAMR), which regulates mercury emissions from power plants. CAIR will permanently cap emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) in 28 eastern states. CAMR permanently caps and reduces mercury emissions from coal-fired power plants for the first time ever. The Department is in the process of finalizing its own CAIR and CAMR regulations.

## **F. *Hazardous Air Pollutant Issues***

### **1. *MACT***

As authorized by the 1990 Clean Air Act Amendments, EPA developed technology- and performance-based maximum achievable control technology (MACT) standards that apply to a variety of industrial activities. For major sources, these standards are incorporated into the Title V Operating Permit.

EPA promulgated all of the MACT standards for major HAP sources that were included on the original list of 174 source categories. Not all of the compliance dates (usually 3 years after promulgation) have passed.<sup>16</sup>

EPA is now focusing their efforts on developing residual risk and area source standards. EPA must promulgate 70 area sources standards by 2009.<sup>17</sup>

In CY 2005, EPA exempted five area source MACT categories from Title V permitting; perchloroethylene dry cleaners, chromium electroplating, ethylene oxide sterilizers, halogenated solvent cleaners and secondary aluminum.

On December 19, 2005, EPA delisted Methyl Ethyl Ketone (MEK) as a hazardous air pollutant.

### **2. *Residual Risk***

Although MACT represents strict levels of emission controls, Congress recognized that even with full implementation of the MACT program risks from toxic air pollutants would not diminish to zero.

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<sup>16</sup> <http://www.epa.gov/ttn/atw/mactfnlalplh.html>

<sup>17</sup> <http://www.epa.gov/ttn/atw/urban/arearules.html>

To that end Congress created a residual risk program intended to:

- assess any risks remaining after MACT standard compliance;
- determine if additional emission reductions are necessary and, if so, for which MACT categories;
- set a standard that protects the public with an "ample margin of safety"; and,
- set a more stringent standard, if necessary, taking into account cost, safety, and other relevant factors, to prevent adverse environmental effects.

EPA intends to follow a two-tiered approach for human health and ecological risk assessment. The first tier is a screening analysis using existing data along with conservative assumptions.<sup>18</sup> If the screening analysis does not conclusively exclude a source, a second tier analysis will be undertaken. The second tier will evaluate the potential exposure with a more detailed analysis including an uncertainty review to evaluate whether an ample margin of safety will be met.

In most cases EPA is supposed to set any residual risk standard no later than eight years following promulgation of the corresponding MACT standard.

EPA promulgated the residual risk standard for coke oven batteries on April 15, 2005. Several residual risk standards are expected to be finalized in CY 2006.

EPA published two guidance manuals (Volume 1--Overview of Air Toxics Risk Assessment and Volume 2--Site-Specific Risk Assessment Guidance) and intends a third document (Volume 3--Community-Scale Risk Assessment) at a later date.<sup>19</sup>

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<sup>18</sup> With respect to human health, if the excess cancer risk is no more than one in a million and the non-cancer hazard index is 0.2 or less no additional regulation will be considered.

<sup>19</sup> Volumes 1 and 2 are available from EPA's web site. They are numbered, respectively, EPA-453-K-04001A and EPA-453-K-04001B.